

**A Review
Of The Ability Of
The Department Of Environment And Conservation
Western Australia
To Manage Major Fires**

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Executive Summary

A bushfire near Boorabbin in Western Australia in December 2007 resulted in the loss of three lives. Subsequently, the W.A. Coroner recommended that a review be conducted of the ability of the Department of Environment and Conservation (DEC) to manage major fires.

In March 2010 the Minister for Environment commissioned the Chief Officer of the South Australian Country Fire Service to undertake a review. The Terms of Reference for the review included:

- preparation, planning, response and recovery in respect of major bushfires and strategies for the evaluation and management of bushfire threat and risk;
- management structure, command and control arrangements, training and resources;
- communication and coordination arrangements with other fire management agencies; and
- equipment and public information strategy.

The review concluded that DEC has a sound capability and capacity for managing fire on its estate in Western Australia.

A number of observations have been made that highlight where improvements to DEC and its systems of work can be made. These observations are:

1. The DEC corporate statement should affirm a strong commitment to fire management.
2. The DEC Fire Management Policy should be reviewed and updated.
3. DEC should consider publishing a new reference document that describes policy, doctrine and key systems of work of the fire management system. This document would be a “brief case” or “back pack” reference and would be reviewed annually and issued to all senior staff and fire management personnel.
4. It is sensible that, in considering planning development proposals on land adjacent to the DEC estate, that development authorities invite comment from DEC on the fire management consequences of development proposals.
5. DEC should emphasise the principle of foresight by adopting an appreciation and decision making process and training staff in that process.
6. Conducting a pre-fire season exercise for each Pre-Formed Incident Management Team could be used to “re-accrediting” each team on an annual basis.
7. DEC’s incident management capability could be enhanced by:
 - Appointing a Deputy Incident Controller for every Level 3 IMT.
 - Establishing a fast response “short” IMT capability for each Level 3 IMT.

- Establish clear triggers to initiate sending in a “short” IMT to a fire.
 - Including FESA officers in pre-formed Level 3 IMT’s.
 - Establishing additional pre-formed Level 3 IMT’s with FESA.
 - Where appropriate, appointing a local Bush Fire Brigade officer as Deputy Operations Officer.
8. A summary Incident Action Plan could allow the Incident Controller to more quickly appreciate the situation and articulate a plan early in an incident.
 9. Higher level DEC guidance to Level 3 Incident Controllers could be improved by introducing a more explicit and robust process of questioning, engagement, monitoring and oversight of Level 3 Incident Controllers.
 10. The Hazard Management Agency for bushfire has not been defined. Defining the HMA for bushfire should be addressed.
 11. Triggers and a process for transfer of command and control from DEC to FESA should be developed and documented.
 12. The Interagency Bushfire Management Committee and its sub-committees are the logical central platform for developing and strengthening future joint bushfire strategies and common systems of work between bushfire management agencies in Western Australia.
 13. A Memorandum of Understanding signed by the Chief Executives of DEC and FESA would be a valuable statement of joint commitment between the two agencies.
 14. The development of a three year aerial firefighting strategy for W.A. would ensure optimal development of a joint air capability.
 15. Maintaining the DEC fleet of tankers, bulldozers and low loaders is crucial to DEC’s fire management and control capability.
 16. A DEC fire management staff succession plan would minimise the loss of core fire management skills and experience in the future and provide a planned approach to development of prospective fire management staff.
 17. A staff recognition and reward framework for service to fire management should be considered for DEC fire staff.

It is recommended that DEC analyse each observation and develop a continuous improvement action plan based on the observations.

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*“Our greatest glory is not in never falling,
but in rising every time we fall.” (Confucius)*

Background

In December 2007 a major bushfire occurred in the goldfields region of Western Australia. On 30th December three truck drivers were killed when they and the vehicles they were driving, were consumed by the fire as it crossed the Great Eastern Highway near Boorabbin. Following the fire the Western Australian State Coroner convened a Coronial Inquest. The finding from the Coronial Inquest of the Boorabbin fire was brought down on 20 November 2009.

Recommendation 5 from this Coronial Inquest by State Coroner Alistair Hope was:

“I recommend that a review be conducted of DEC’s ability to manage major fires and consideration be given to increased direct involvement by FESA in fire management role (sic) in the case of major fires on reserves and unallocated crown lands.”

On 11th March 2010 the Minister for Environment The Hon. Donna Faragher MP engaged Mr Euan Ferguson AFSM, Chief Officer of the South Australian Country Fire Service, to undertake a review of the capability of the Department of Environment and Conservation. This engagement was arranged through the Premiers of Western Australia and South Australia.

Terms of Reference

“The review will examine and evaluate DEC’s ability to manage major bushfires taking into account work previously undertaken through the *Review of Western Australia’s Bushfire Preparedness 2009*, *GHD Operational Review 2008*, the *Bush Fires Amendment Bill 2009*, the *Auditor-General’s Report Responding to Major Bushfires 2004* and the State Government’s *WESTPLAN-BUSHFIRE* plan as well as the current roles and responsibilities of DEC, the Fire and Emergency Services Authority and local government in bushfire management.

In particular the review will consider DEC’s:

- preparation, planning, response and recovery in respect of major bushfires and strategies for the evaluation and management of bushfire threat and risk;
- management structure, command and control arrangements, training and resources;
- communication and coordination arrangements with other fire management agencies; and
- equipment and public information strategy.”

Consultation

This review is based on information received from:

- Current and historical inquiries, plans, procedures and public documents.
- Discussions with officers from the Department of the Premier and Cabinet (DPC); Department of Environment and Conservation (DEC); Fire and Emergency Services Authority (FESA); WA Police (WAPOL) and Officers from various Local Government areas.
- Invited written submissions from key stakeholders. The list of stakeholders who provided comment is found at the end of this report.
- A field visit with senior DEC and DPC Officers to parts of the south west of Western Australia.

Ability and capability

At core of the review is the ability of DEC to manage major bushfires. Using definitions from the Pocket Macquarie Dictionary:

Able is defined as (1) “having enough power, skill, knowledge or opportunity”; and (2) “having or showing special skills or knowledge”.

Capability is defined as (1) “the quality of being capable; capacity; ability”; and (2) “a quality, ability, etc, that can be developed or used”.

For the purpose of this review, the reviewer has extensively used the term “capability” rather than “ability”. This is deliberate. It is the reviewer’s view that using the term “capability” has allowed a broader exploration of the underlying qualities that lead to the outcome that is “ability”.

Methodology

In the course of this review a set of criteria for assessing capability for major bushfire management has been developed. These criteria and the assessment of DEC’s capability against each criteria are complimentary to the Terms of Reference. This assessment is presented as a summary “traffic light” analysis for ease of interpretation. This analysis provides a further insight into the quality, capacity and ability of DEC and its people to manage large fires. This analysis and the criteria are found at Appendix A.

The conclusions and observations made are often based on qualitative professional judgement by the assessor. This judgement has been arrived at after examination of many documents, consideration of written submissions, and information gleaned from briefings, field visits and meetings with officers.

Wherever possible all information and viewpoints have been taken into account in these assessments and conclusions. It is acknowledged that these assessments are the best endeavours by the reviewer at the time, using the information available and in the time available.

Background – Key issues for bushfire management in Western Australia for the next 5 years

Before focussing on the DEC fire management role in Western Australia, it is useful to put into context the key issues that face DEC bushfire managers in the next 5 years. Many of these issues have national or global relevance and do not just apply to W.A. or to DEC. These issues are summarised here and dealt with in more detail within the report:

- **Land use and landscape fire management policy is increasingly complex.** Balancing between the competing demands of good fire management on one hand, versus biodiversity conservation on another, and the needs of development on the other, create ongoing tensions. Fire management policy often becomes a balance of compromise. This balance may shift in the aftermath of key events (such as a major bushfire). Two local examples of complex fire management policy debate are found in the debate on the extent and frequency of fuel reduction burning on public lands; and secondly, the issue of wine grape smoke taint from prescribed burning.
- **Structured networks of cooperative partnerships will be necessary to underpin relationships between fire management players.** The relationships formed through high level partnerships will be critical for successful consultation, collaborative planning, empathy and resolution of complex, and at times conflicting, views.
- **The philosophy of shared responsibility is core to bushfire management policy.** Bushfire is of the land. The bushfire risk in much of W.A. will persist. The responsibility of landholders - including public land owners – for fire management is fundamental. If you own the fuel, you own the fire and so you also share the responsibility for fire management. Bushfire risk is also of the people. West Australians need to learn to live with fire and to increase community resilience against bushfire impacts. Good communication, a sense of mutual obligation and cooperation are essential for effective and unified action.
- **Our vulnerability to bushfire will continue to increase in the future.** This is due in part to increasing development in bushfire risk areas and the possible effects of long term drought and climate change.
- **Fire managers are being held more accountable.** Greater accountability that brings with it higher expectations of fire manager performance and lower thresholds for failure. Bushfire management is often high profile, high risk and high consequence. The challenge for agencies is to create a framework that trains, supports and develops fire managers in order that expectations can be met.
- **DEC is facing a loss of people with specialist forest fire skills, experience and corporate fire knowledge.** Fire management, especially forest fire management, is a specialised capability. This capability is dependent on established doctrine, and the training, skills and experience of agency personnel. There is a risk of losing fire management capability as current staff retire and new staff are

recruited. A key challenge will be to recruit, train, retain and motivate future staff and volunteers into key bushfire management roles.

- **A culture of “lessons learned” is essential for continuous improvement.** Bushfire management policy and doctrine is continuously evolving, in response to lessons learned from critical events, from research and from public policy debate. The best bushfire and emergency management agencies develop and reward a culture of change, adaptation and continuous improvement. Core to this is developing a culture of lessons learned from experiences locally and elsewhere.
- **Competition for scarce resources.** Like any other public officer, the bushfire manager balances increasing expectations in an environment of competition for dwindling resources.
- **Bushfire management principles.** The principles of bushfire management articulated in Chapter 14 of the 2004 Council of Australian Governments (COAG) Report into Bushfire Mitigation and Management continue to be a foundation for bushfire management. These principles are worthy of reiteration at State and organisational level:
 - Bushfires are understood, accepted and respected.
 - Shared responsibility.
 - Decisions within a risk management framework.
 - Integration of learning and knowledge.
 - Manage fire according to the landscape objectives.
 - Consistency of purpose and unity of command.
 - Protection of lives as the highest consideration.
 - Monitoring performance.

Terms of Reference # 1:
DEC’s preparation, planning, response and recovery in respect of major bushfires and strategies for the evaluation and management of bushfire threat and risk

DEC’s submission

DEC has key responsibilities including broad roles in conserving biodiversity and protecting, managing, regulating and assessing many aspects of the State’s natural resources. The CALM Act (Ss 33 (1) & (3)) provides that DEC’s fire management activities are subject to land management plans.

DEC plays a lead fire management role in the south west forest regions, midwest and south coast regions. In other parts of W.A., DEC has fewer fire management resources. In these areas, the primary fire management resources are with local government and DEC provides operational support where their land tenure is involved or threatened.

DEC's fire management activities are governed by Policy Statement No: 19. Included in this policy are a set of "principles for fire management". DEC also has a "Code of Practice for Fire Management" which provides a framework for fire management and procedures on DEC managed lands.

DEC has a compendium of Fire Operational Guidelines (or "FOGs"). At January 2010 there were 81 FOGs. DEC also has a suite of fire training manuals and syllabuses.

DEC is in the process of developing a scenario-based fire risk to resources model. This is intended to set, monitor and audit resource levels and to validate perceived shortfalls in resourcing or preparedness.

DEC require an Incident Preparedness and Response Plan to be prepared for State Headquarters and for each of 15 districts and 9 Regions.

Key points from other submissions

The Association of Volunteer Bush Fire Brigades state that since the 1961 Dwellingup fire DEC has conducted research and implemented improved strategies for the evaluation and management of bushfire threat and risk. These are well implemented. DEC is *"by far the most capable authority when it comes to understanding and managing broad acre fires and is trusted by the majority of bushfire brigades"*. DEC are often a *"vital contributor to fire management"* including their representation on Bushfire Advisory Committee meetings. [6]

The AWU makes the point that the extensive fire suppression expertise and resources within DEC are recognised nationally and internationally, and that this is illustrated by the deployment of 45 DEC firefighters to Victoria during the 2009 Victorian bushfire emergency. [4]

W.A. Police (WAPol) point out that DEC has a *"strong history of responding to bushfires, usually with great efficiency and effectiveness"*. [3]

The Forest Products Commission submits that DEC has a comprehensive landscape approach to PPRR and its Wildfire Threat Analysis is an excellent tool for the management of unplanned bushfire threat and risk. DEC's approach to PPRR is consistent with WESTPLAN-Bushfire. [7]

Evidence was submitted that DEC Officers play an active role in Local Emergency Management Committees. In areas where DEC has a substantial estate, DEC undertake pre-season briefings to which local governments and volunteers are invited. Local Government Officers expressed confidence in the level of knowledge and experience in fire prevention, management and behaviour that DEC Officers possess.

The submission from Fire For Life Inc. says: *"It is our belief that DEC is the natural and rightful body to control fire suppression in forested and bush land government areas. ... they have 90 years of history that has them recognised nationally and internationally for their fire suppression and knowledge"*. They go on to say that

DEC's aircraft and tower detection are the key element in sighting and getting that early response so vital in the end result. [11]

In a detailed submission, the Bushfire Front reinforce that fighting fires in the south west forests of the state is specialist work to which DEC is well trained and have long experience. They say that in the south west, fire detection and first response systems are first-class and that fire suppression operations in south west forests are enhanced by the program of fuel reduction burning. They also say that the situation is very different in DEC's remote inland and northern regions where:

- There is limited fuel reduction burning.
- There are fewer DEC staff on the ground.
- The area is large and access is poor.
- There is no formal detection system.
- There is no tradition of large Incident Management Teams for fires.

The view of the Bushfire Front is that DEC should focus its fire management and resources in the south west regions. Beyond the south west, DEC should limit its role to (i) land management planning, operations and fire research; (ii) strategic fuel reduction; (iii) support for fire suppression operations; and (iv) post-fire recovery and rehabilitation. Beyond the south west FESA should be responsible for the actual suppression of fires (including establishing IMT's), with DEC providing technical support and trained staff to fit within the IMT run by FESA.

The AWU say that many employees are rostered on multiple availability rosters, resulting in long periods on call or working extended shifts. The result is a growing fatigue problem.

The AWU reinforce that a significant proportion of the long term highly experienced employees will be looking towards retirement or non-fire duties in the coming 5 to 10 years. Unless addressed, DEC could be left critically short of the necessary experience in the future. Whilst greater inclusion of volunteers is an option, the AWU caution at over-reliance on volunteers. [4]

The Bushfire Front goes on to discuss organisational culture by questioning whether bushfire management is a core part of the DEC business with associated priority for staffing and funding and a voice at the highest level in the Department. The Bushfire Front also questions whether DEC recognises the importance of maintaining high levels of permanent well trained staff in districts in the field.

Three issues are identified by The Bushfire Front:

1. Fire is not a priority at corporate level.
2. There is no system of independent audit (of the fire program).
3. The fuel reduction burning program is years behind schedule. [5]

The Bush Fire Front questions whether DEC's bushfire management system and operations should be subject to an annual review, followed by a public report.

One submission recognised the challenge that DEC faces in carrying out fire prevention activities. In particular it was recognised that DEC faces heavy public criticism over smoke issues from prescribed burning.

Conversely, the W.A. Farmer's Federation says that: "*There has been grossly inadequate hazard reduction burning on public lands for too long*"; and that volunteers are "*fed up*" with having their lives put at risk by fire trails that are blocked and left without maintenance. [8]

The submission from the Community and Public Sector Union Civil Service Association of W.A. also makes the point that in the case of proposals for housing or industry adjacent to DEC controlled land, that DEC should routinely be consulted prior to planning permission being granted. [12]

Discussion

As a natural resource and land manager, fire management is a core responsibility of DEC. Consistent with the principle of shared responsibility is the principle that, if you own (or manage) the fuel, then you own the fire. Thus as a land manager, DEC has a responsibility to manage fire (and the fuel) on the DEC part of the landscape. The nexus between land ownership or management on one hand, and fire management responsibility on the other hand, is fundamental.

Evidence provided by DEC staff was that there is a "very strong" corporate commitment to fire management in DEC. To a large degree, this commitment is reliant on the attitude, skills and experience of senior DEC managers and executives. This commitment is applauded. Consideration needs to be given to strengthening and clarifying DEC's written commitment to fire management at a corporate level. This commitment will become more important as current generation staff retire and a new generation of managers (perhaps with less of a fire background) emerge. The risk is that with a new generation may emerge a new ethos around fire that may be less than the current ethos.

DEC statement of Fire Management Policy is found in Policy Statement Number 19 dated October 2005. This policy should be updated. In updating this fire Management policy, consideration should be given to:

- Making a clear statement of the high level objectives of the fire management policy. These objectives should be capable of annual audit or measurement and annual reporting.
- Making a clear short and simple statement about the operational fire "mission". This mission statement should include reference to the primacy of life and the priority that will be given to fire suppression (over other Departmental activities). Any fire "mission" statement must be consistent with similar statements by FESA.
- Reviewing the "Principles for Fire Management" (found in the Appendix to the Fire Management Policy). The existing principles deal comprehensively with biodiversity considerations. Additional principles that could be considered, or that need greater prominence include: the safety of personnel; cooperation with other agencies; unity of command; decision-making to be based on risk; and foresight.
- Ensuring that the policy links to the State Emergency Management Plan for Bushfire (WESTPLAN-Bushfire).

Consideration should be given to incorporating part of the high level fire policy objectives and operational fire mission in the DEC Corporate Plan. This could be by way of a statement of commitment by the DEC Chief Executive to the fire management principles.

DEC can demonstrate a comprehensive suite of policy statements, administration instructions and operational guidelines. In particular, the DEC Fire Operational Guidelines (FOGs) provide detailed advice and procedures on a wide range of fire management matters.

With an increasingly “networked” and multi-skilled, multi-function workforce, the need for a clear and comprehensive DEC fire policy and guidelines framework is crucial. Such a framework forms the basis of the fire management “doctrine” for DEC. The doctrine captures historical knowledge and can incorporate adaptations to the fire management systems from lessons learned. Doctrine becomes a reference point for DEC staff, a resource to teach incoming generations of fire managers, and a base to compare and contrast with other organisations.

The current fire management policy and guidelines framework is comprehensive. However to meet future needs of staff, there may be advantages in bringing all key fire management policies, or a high level summary thereof, together into one ready reference document. This has a number of advantages:

- There would be one source for key DEC wide fire policy.
- The document would be a summary description of the systems of work used by DEC, (including relevant FESA and the State Emergency Management Committee policy).
- It would allow a copy to be issued to every DEC employee associated with fire management. The document could be a readily accessible “brief case or back pack” guideline reference for fire personnel.
- If reviewed annually (as part of a continuous improvement framework) it forms the basis for adaptation and change.
- Consistent with this, it will allow senior DEC officers to reinforce key aspects of policy (eg: safety) and to articulate key changes year to year.
- The document would provide a useful public record for stakeholder agencies.

DEC fire doctrine could also consider including:

- The DEC corporate statement of commitment to fire, the fire “mission”, and fire management objectives.
- A summary of key definitions.
- A set of “core individual behaviours” that set out the expectations of how DEC fire employees will go about their job.
- Key systems of work that DEC uses to achieve its fire management mission and objectives. (Examples include fire management principles, risk management, AIIMS and after action reviews).
- A simple operational decision-making process and adaptation cycle. (A contemporary example is found in the United States National Wildfire Coordinating Group publication PMS 494-2 “Leading in the Wildland Fire Service” 2007).

It is noted that DEC has used a “Wildfire Threat Analysis” model for fire management planning. In their submission, DEC advise they are in the process of developing a scenario-based fire risk to resources model. This is intended to set, monitor and audit resource levels and to validate perceived shortfalls in resourcing or preparedness. The development of this model is strongly supported. If incorporated with a set of fire management objectives, the model should become a basis for regular audit, reporting and future resource requests.

The Western Australian “Shared Land Information System” that enables a common platform and multi-agency access to land information and risk data is considered to be best in its class.

A number of DEC Fire Operations Guidelines are considered as being “Best in class” or “Best practice”. These include FOG 31 (After action reviews and post incident analysis); FOG 03 (Minimal requirements for incident action plan); and FOG 05 (Red carding – AIIMS role accreditation).

Observations

- 1. The DEC corporate statement should affirm a strong commitment to fire management.**
- 2. The DEC Fire Management Policy should be reviewed and updated.**
- 3. DEC should consider publishing a new reference document that describes policy, doctrine and key systems of work of the fire management system. This document would be a “brief case” or “back pack” reference and would be reviewed annually and issued to all senior staff and fire management personnel.**
- 4. It is sensible that, in considering planning development proposals on land adjacent to the DEC estate, that development authorities invite comment from DEC on the fire management consequences of development proposals.**

Terms of Reference # 2:

DEC’s management structure, command and control arrangements, training and resources

DEC’s submission

DEC has adopted and implemented the Australasian Inter-service Incident Management System (AIIMS). DEC’s approach has been to develop five pre-formed Level 3 Incident Management Teams. Each team consists of 64 persons. One pre-formed IMT is rostered on call each week during the fire season.

DEC submitted details of a significant set of ground, air, logistic and incident support resources. It is noted that DEC has concentrated on having a high degree of mobility of its fire fighting resources.

DEC drew attention to the potential “loss” of up to 90 staff from the Forest Products Commission associated with changes proposed to that organisation.

DEC outlined a comprehensive fire training program. In particular, the Advanced Incident Leadership Program and the Fireline Leadership Program provide underpinning skills for incident management. DEC training routinely includes personnel from FPC, FESA, Local Government, Volunteer Bush Fire Brigades and contractors.

DEC also view the recently developed major incident management course (with DEC, FESA and WAPol) as an important incident management course.

DEC also states that the arrangement that sees the formation of an Incident Support Group (ISG) and Regional or Operational Area Support Group (OASG) has been a very positive recent development.

DEC reinforce that they have a significant capacity and capability in the south of the state. Examples of this capability include:

- Oct-Dec 2006: 25 significant lightning caused fires that were all rapidly controlled.
- 16-22 Jan 2009: DEC concurrently controlled major bushfires at Bridgetown and at Yanchep. 560 DEC staff were committed.
- 14 other fires were cited from between 2003 and 2009 where DEC played a primary or vital support role.

Key points from other submissions

FESA advises that the amendments to the Bush Fires Act (1954) “*have settled for once and for all the long running debate over who should be in control of major bushfires in W.A.*”. The legislation now provides FESA with the power to take control of bushfire from both DEC and from local government.

FESA expressed a view that resource sharing has not always been achievable due to cultural issues across the organisations. However FESA say that the recently formed Interagency Bushfire Management Committee (which reports to the Minister for Emergency Services) has improved working relationships and coordination to bushfire responses. [2]

W.A. Police (WAPol) draws attention to a “*perceived preference for management of fire as opposed to mitigating the risk of fire continuation by fire suppression at the earliest opportunity*”. WAPol go on to say that the Boorabbin fire throws into question the process around the appointment of a Level 3 Incident Controller; information handling; and the decision-making process. WAPol suggest that DEC should consider adopting the concept of unified command.

WAPOL make the following additional points:

- There is considerable support in WAPol for a single Hazard Management Agency (HMA).
- That the consensus in WAPol is that FESA should be the HMA.
- Amendments to the Bush Fires Act empower FESA to assume control of a fire. The triggers for when this happens are not prescribed. [3]

The Forest Products Commission submits that DEC has a comprehensive fire training program that is based on national competency standards. FPC supports the concept of pre-formed Level 3 Incident Management Teams for statewide deployment. FPC also acknowledge that firefighting and fire management resources can and have been stretched in recent years. [7]

The Association of Volunteer Bush Fire Brigades says that DEC's management structure is "*firmly established and operates very well*" and that in large fires DEC are efficient at deploying and setting up their command system. Recognition was also given to the importance of hands-on experience that DEC officer get from the conduct of fuel reduction burns. [6]

Other comments recognised the significant effort that DEC has put into developing AIIMS and Incident Management Teams. It was put that DEC's knowledge of bushfire management and the professionalism of its approach is unrivalled in the State.

IMT's incorporate local government and Volunteer Bush Fire Brigades personnel wherever possible and that DEC's move to adopt mobile IMT facilities and infrastructure has increased effectiveness and flexibility of incident management.

One submission says that DEC has enabled local government staff and volunteer firefighters to undertake controlled burns and training with DEC, demonstrating an open and inclusive philosophy.

Various submissions expressed satisfaction with the management of specific bushfires. Examples given include:

- The Ferndale/Greenbushes/Balingup fire. [9]
- The Yabberup fire. [9]
- The Noggerup fire. [9]
- The 2009 Bridgetown fire. [6]
- The 2009 Lancelin fire. [3]
- Fires at Bridgetown; Dwellingup and Prevelly. [6]

Local Government commented that the DEC professionalism in dealing with larger fires was "*impressive*".

The W.A. Farmer's Federation makes the following points in regard to bushfire suppression by DEC:

- That local knowledge and experience is being ignored by an increasingly top heavy bureaucracy.
- That there is "*reluctance by state agencies to aggressively attack bushfires when they first start*".

- Incident coordination with W.A. Police has to improve: “... *their (WAPOL) acceptance that controlling traffic or public movement at an incident needs to be their primary function*” at a bushfire.
- There are only a small number of large bushfires each year and FESA should have the ultimate supervising role.

The Bush Fire Front states that the DEC large fire organisation works very well in the south west of the state (an area defined as west of a line from Geraldton to Fitzgerald River). They go on to say that: “*The critical question posed for DEC is the extent to which they attempt to develop their fire management capability in remote areas and whether they can afford to develop an IMT every time there is a large or potentially damaging fire in a remote area*”.

The Bush Fire Front goes on to say that “*DEC’s incident management system is seriously threatened by the loss of good staff and DEC’s failure to recruit and monitor young professional staff*”. [5]

Fire For Life says that the Boorabbin fire reinforced “*the necessity for an early assessment being made of the fire’s potential in the short term, medium and long term*”. Since the Boorabbin inquiry a number of DEC staff have withdrawn their services because of the tone of the publicity and associated comments. Fire For Life go on to say “*If DEC is to have control of forest fires, these are areas they need to address to maintain their capacity to function. One is management of staff*”.

This submission goes on to suggest that DEC recruitment has been very focussed on scientific achievers, who are unlikely to be attracted to fire manager positions. The submission goes on to say that with the creation of DEC and the Forest Products Commission, many practical mid level managers went to the FPC. [11]

The Community and Public Sector Union Civil Service Association of WA says that good relationships exist between DEC, FESA local governments and Bush Fire Brigades. They acknowledge improved participation by Police and Main Roads W.A., but note that improvements need to be ongoing. The Association makes a number of valuable suggestions in relation to Incident Management Teams. They suggest that:

- In order to meet resource deficiencies, DEC should consider forming an additional pre-formed Incident Management Team.
- A “flying squad of key personnel” be formed who can be deployed to assume control of major fires as soon as insufficient resources have been identified. They suggest this could be comprised of an Incident Controller; two Planning Officers; a Logistics Officer and an Operations Officer.
- Every pre-formed Incident Management Team be led and deployed with a Level 3 Incident Controller.
- All DEC job descriptions are amended to include reference to fire.
- A fatigue management strategy is required for DEC fire workers.

The PSUCSA also makes a range of recommendations on training, mentoring and succession planning. They also say that training competency of contractors needs addressing and suggest that fire accreditation cards be issued to fire contractors.

Discussion

Evidence put to the review supports a conclusion that DEC is very capable at large bushfire management. Incident management supporting systems for training, accreditation and after action review are established and work well. A number of suggestions are made to further enhance these processes.

DEC has established a Fire Management Services Branch that is within the Regional Services Directorate. As the majority of the fire workforce is drawn from the Regional Services Directorate, this structural arrangement is sound.

DEC's implementation of AIIMS is one of the most mature in Australia. In particular, the policy of establishing Pre-Formed Incident Management Teams provides a known capability for incident management. Arrangement is documented in DEC's pre-formed Incident Management Team handbook [18].

This arrangement is reinforced by DEC's policy on accreditation for personnel for designated AIIMS roles. This policy includes arrangements for an accreditation up to 3 years; review by a "Regional Red Card Committee"; establishment of a corporate red card database; a requirement to maintain a personnel incident log; and post event personal performance appraisals.

Pre-Formed Incident Management Teams assemble before the fire season each year to prepare for the season. The intent is to integrate and familiarise new members, to check equipment and processes and to incorporate new procedures arising from lessons learned. The DEC accreditation process would be strengthened if a formal assessable exercise was conducted annually. The purpose of the exercise should be to re-affirm the competence and the capability of the team as a whole. Such an exercise should be not less than 6 hours in duration and could include a number of contingency scenarios that are deliberately introduced to exercise decision-making capability.

The outcome of pre-season exercise should lead to an overall assessment of the capability of the team. The outcome could also identify areas for improvement for the team as a whole or for individual members of the team.

DEC has developed a high level course, the "Advanced Incident Leadership Program". The course targets the development of Level 3 incident managers. Participants on this course include international and interstate presenters and students. This course is highly regarded. A strong feature of the course is the analysis of decision making in high action environments. Decision making is, to a much lesser degree, also covered by the process of "options analysis" that is incorporated in the AIIMS course and documentation.

It is interesting to note, however, that there was no evidence that DEC has adopted any particular process of appreciation or decision making as part of its organisational doctrine or systems of work.

Following the Boorabbin fire a team of experienced DEC personnel carried out a post incident analysis [22]. This analysis is a very honest and thorough assessment of that incident. At page 72 of the analysis, in discussing the strategic appreciation of the

Boorabbin fire, the authors say: *“In terms of the human element of the system, the Coordination Group came to the view that there is a tendency in some IMT’s to be fixated on completing the IMS templates and processes so a complete and coherent IAP is available on time for the next shift. Consequently plans tend to be short term and can fail to stand back and take the “big view” of the incident.”*¹ The report goes on to say that an analysis of the “worst case scenario” was not undertaken (p.73) and that resources fitted the *“best case scenario”* (p.89). On page 131, the report questions whether DEC has become too *“process focussed”* by numerous planning templates. The report highlights that initial appraisals failed to foresee the full potential of the fire and that simple hand drawn maps would have served a useful purpose in such a situation.

The observations of the Boorabbin Fire Post Incident Analysis team in relation to the use of foresight and decision-making are profound.

There are numerous deliberative decision making models. Generally such models have four or five steps that go through an appreciation process that leads to a decision and a plan. Such a process could have steps such as:

1. A short statement of mission, intent or objective (set by the Incident Controller and consistent with organisational intent).
2. Consideration of the key factors, now and into the future. Critical information includes those factors that are going to affect fire progression in the next 2 planning periods.
3. Development of options. This should include as a minimum, consideration of a “worst case” and “most likely” option.
4. An analysis of each option against the key factors. A critical part of this analysis is assessing the consequence of each option but particularly of the “worst case” option.
5. Arrival at a course of action (the plan) that balances likelihood and consequence.

For bushfire, a map (or, if not available, a “mud map”) is crucial to exercise foresight. As observed in the Post Incident Analysis, this sort of decision process should not necessarily become bogged down. A decision process should fit into the time available but must cover the future progression (up to 24 hours ahead) of the worst case scenario. An appreciation and decision process must fit into the time available. A five minute high level appreciation and decision process, using hand drawn maps and field notes, and involving key IMT members, may not necessarily produce a detailed proforma plan, but it is at least better than no plan at all, or a plan that is produced without high level analysis.

DEC and FESA could also investigate the merit of incorporating a “Summary Incident Action Plan” in IMT processes. The intent would be that the incident controller carries out a rapid appreciation of the situation and provides quick high level summary of the intended actions. If prepared in a timely manner, the Summary Incident Action Plan can be quickly communicated to the team (especially the operations section), up the DEC and FESA chains of command and to other collaborating agencies.

¹ IMS is Incident Management System; IAP is Incident Action Plan.

DEC demonstrated an admirable capacity to mobilise incident management teams in order that they are located close to the incident. DEC has designed key equipment, infrastructure and telecommunications links to be highly mobile and ruggedised. This approach was strongly endorsed by local government and other agencies associated with the Bridgetown fire in 2009. This concept of mobility should continue to be developed.

DEC's incident management capability could also be enhanced by:

- **Always appointing a Deputy Incident Controller:** Ensuring that every Incident Management Team has a competent Deputy Incident Controller who is able to perform the role of the Incident Controller with limited supervision. This would free up the Incident Controller to undertake a proper “big picture” strategic appreciation and analysis and to engage with key players.
- **Establishing a fast response “short” Incident Management Team (IMT) capability:** Each team should have a small number of key personnel who can very quickly be moved in to a fire area to integrate with local incident managers and to prepare for the larger team. This “short” team could include the positions of: Incident Controller and Deputy; Planning, Situation, Resources, Information, Logistics (x2) and Operations Officers (9 in total). A “short” team should have the capability of being flown in to an incident and to be available at very short notice.
- **Clear triggers to initiate sending in a “short” IMT to fires should be established:** These triggers are especially needed for fires in areas to the east and north of DEC's traditional centre of gravity in the south west of the state.
- **Including FESA officers in pre-formed IMT's:** DEC and FESA should discuss inclusion of specific FESA officers on the DEC Pre-Formed Incident Management Teams.
- **Establishing additional pre-formed IMT's with FESA:** DEC and FESA should discuss the merits of establishing more Pre-Formed Incident Management Teams with membership from FESA, DEC, local government, Bush Fire Brigades and other government agencies.
- **Appointing a local Bush Fire Brigade officer as Deputy Operations Officer:** When an incident management team is dealing with a fire that has bush fire brigades included in fireground resources, or the fire has potential to affect privately owned land, that a senior bush fire brigade officer be appointed as a Deputy Operations Officer.

It is noted that, since the Boorabbin fire, the State Emergency Management Committee has established a framework which allows for an “Incident Support Group” (ISG) and an “Operations Area Support Group” (OASG) to be established for a particular incident situation.

The concept of Incident Support Groups and Operations Area Support Groups is strongly supported. The ISG or OASG are a basis for support to the Incident Controller and provides a multi-agency platform for high level engagement, oversight and monitoring.

Notwithstanding the ability of a competent and accredited Incident Controller, and the ability to form an ISG or OASG, the chain of information and supervision within DEC is also very important. Senior DEC officers can and should offer expertise and advice to an Incident Controller. They can provide support, guidance and pose questions to test the effectiveness of a strategy.

The line of reporting above a Level 3 Incident Controller, within DEC is a very important link in the DEC chain of command. DEC procedures allow for a Level 3 Incident Controller to report to the relevant Area Manager who in turn reports through to the DEC Fire State Duty Officer. The process for a Level 3 Incident Controller to report to DEC higher level management (right up to the Chief Executive) needs to be re-affirmed, given more prominence and greater clarity of role.

Higher level guidance within the DEC chain of command needs to be more rigorous. The intent of higher level guidance is not to second guess or undermine the Incident Controller. Rather, the intent is to engage, oversee and monitor the overall suppression effort (or efforts), to test for possible weaknesses – particularly future resource needs, to act as a “devil’s advocate” and to offer physical and moral support. Equally important is the need, at a higher level, to engage with collaborating agencies, political leaders and other key groups who operate at a regional or state level.

Supervision could be improved if DEC developed, in conjunction with Level 3 Incident Controllers and State and Regional Duty Officers, a robust process whereby higher level officers can ask questions and make judgements about the Level 3 Incident Management Team. This is a sensitive subject. The intent of this suggestion is not to set up a process to second guess the Incident Management Team. However a more structured process would add value to overall decision making and should identify issues of performance or resourcing that can be corrected before they impact on operations.

Observations

5. DEC should emphasise the principle of foresight by adopting an appreciation and decision making process and training staff in that process.

6. Conducting a pre-fire season exercise for each Pre-Formed Incident Management Team could be used to “re-accrediting” each team on an annual basis.

7. DEC’s incident management capability could be enhanced by:

- Appointing a Deputy Incident Controller for every Level 3 IMT.**
- Establishing a fast response “short” IMT capability for each Level 3 IMT.**
- Establish clear triggers to initiate sending in a “short” IMT to a fire.**
- Including FESA officers in pre-formed Level 3 IMT’s.**

- **Establishing additional pre-formed Level 3 IMT's with FESA.**
- **Where appropriate, appointing a local Bush Fire Brigade officer as Deputy Operations Officer.**

8. A summary Incident Action Plan could allow the Incident Controller to more quickly appreciate the situation and articulate a plan early in an incident.

9. Higher level DEC guidance to Level 3 Incident Controllers could be improved by introducing a more explicit and robust process of questioning, engagement, monitoring and oversight of Level 3 Incident Controllers.

**Terms of Reference # 3:
DEC's communication and coordination arrangements with other fire
management agencies**

Key points from other submissions

The Forest Products Commission strongly supports DEC in its fire management operations with over 100 FPC staff. They advise that an imminent restructure of FPC may impact on the future capacity of FPC to participate in fire management activities. This may have a critical impact on DEC's resourcing and capacity.

The Association of Volunteer Bush Fire Brigades advises that the level of communication and coordination between DEC, Bush Fire Brigades and Local Government is very good and that "*DEC is good at communicating with other agencies*". [6]

Evidence and comments supported that DEC Officers make significant efforts to be a good neighbour and to understand the needs of the community in areas which it manages land. This was particularly evident during significant fires where DEC issued briefing papers, set up community meetings and briefed key stakeholders.

The FPC note that DEC has developed Memoranda of Understanding with some local governments through the Western Australian Local Government Association (WALGA).

FESA believe that DEC generally has good relationships with local government and volunteer Bush Fire Brigades, the key being a common commitment to AIIMS and common radio systems. They also note that these relationships are facilitated by MoUs with some local governments. [2]

FPC also refers to the fact that DEC, FESA and local governments continue to work through "*a variety of issues including differences in organisational culture, and limitations in compatibility of communications infrastructure*". [7]

The W.A. Farmer's Federation states that: "*Better communications between and within relevant agencies is long overdue*". [8]

Other comments and evidence supported that relationships between DEC and Bush Fire Brigades and between DEC and Local Governments were generally excellent.

FESA advise that a single coordination structure and centre through FESA has been established and is documented in WESTPLAN-Bushfire. This arrangement requires all agencies to provide FESA with data relating to bushfires in a timely manner.

FESA also acknowledge the support role that DEC has in facilitating state level coordination of large or multiple bushfire incidents. [2]

Discussion

The relationship between DEC and FESA is a critical one. The reality is that FESA cannot carry out its role without DEC and DEC cannot carry out its role without FESA. Both organisations bring different and distinctive capabilities to fire management in Western Australia.

The review evidenced many examples of outstanding cooperation and collaboration between DEC, FESA, local government and Bush Fire Brigades. There was some evidence provided that at senior levels there still exists potential to strengthen the relationship between DEC and FESA.

Incident management and command and control is a factor of (i) legislation; (ii) doctrine and policies; (iii) organisational culture; and (iv) the attitude and competence of individuals.

The W.A. Emergency Management Act and Regulations allow for a "Hazard Management Agency" (HMA) to be prescribed. At present there is no prescribed HMA for bushfire. This is unhelpful and may potentially contribute to unclear understanding about roles and responsibilities between control agencies during time of increased bushfire risk. In their submission, W.A. Police (WAPol) put a view that there is considerable support in WAPol for a single bushfire Hazard Management Agency (HMA) and that the consensus in WAPol is that FESA should be the HMA for bushfire.

The concept behind establishing a single agency as a Hazard Management Agency is very sound. It is consistent with the principle of "consistency of purpose and unity of command" established by the 2004 COAG Report. Given the frequency and potential consequence of bushfire in much of Western Australia, it would seem logical that the HMA for bushfire is determined. This view was supported by the 2009 Report by the W.A. Auditor-General who said: "*If a hazard or HMA is not listed in the Act or Regulations, agencies cannot use the Act's powers fully during an emergency. These powers include the authority to command people to leave an area or to commandeer equipment in an emergency situation*". In 2009 amendments to the Bush Fires Act empowered FESA to assume control of a bushfire. Despite the clarity now provided by amendments to the Bush Fires Act, the definition of a HMA for bushfire still needs to be addressed.

WAPol also noted in their submission that amendments to the Bush Fires Act empower FESA to assume control of a fire. WAPol noted that the triggers for when this happens are not prescribed [3]. DEC, local government and WAPOL are all important players in the establishment and transfer of command and control. Triggers and a process for transfer of command and control from local government to FESA and from DEC to FESA should be developed and documented.

An Interagency Bushfire Management Committee has been established. This committee reports to the Minister for Emergency Services. The committee has membership from all fire management agencies and has established sub-committees for research; operations; training; fuel load management; and aerial suppression. This committee and its sub-committees should be the central platform for developing and strengthening future joint strategies and common systems of work between bushfire management agencies in Western Australia.

A Memorandum of Understanding (MoU) between DEC and FESA dated 2005 has never been signed. An explicit statement of commitment, signed by Chief Executives and promulgated through agencies, is a useful means to reinforce agency policy and attitudes. The Chief Executives of FESA and DEC should consider reviewing the MoU between the two agencies. The MoU would be an excellent opportunity to articulate a common goal, agreed principles and commit to a joint approach to incident management. For DEC, the MoU could form an important part of the DEC doctrinal document published annually. Such an MoU is more than symbolism. It would set a standard and expectation for all personnel from each agency to aspire to. The MoU should be reviewed and re-issued at least every 3 years.

DEC has adopted MoUs with a number of local governments. These are reported to work well. They support the legislation and set out a clear intent between DEC and the Shire.

The reviewer also noted that DEC is establishing a new operations coordination centre at Kensington. FESA are also building a new facility and operations centre at Cockburn Central. The FESA facility will be designed to allow DEC fire personnel to operate from a designated part of the state coordination centre. Given the principle of “unity of command” the question must be asked: “Is this a missed opportunity to co-locate two important bushfire management agencies?”

When establishing or reviewing systems of work such as training, databases, information systems and incident management facilities, the first question that must be asked (by both DEC and FESA) must be: “Can we do this better together?” There a number of very good examples where this is occurring. These include:

- the Interagency Bushfire Management Committee;
- the land information system database;
- the proposed new communications system;
- the recently introduced telephone emergency warning system;
- joint agency (with WAPol) AIIMS and incident management training.

There is potential for even better collaboration in the following areas:

- joint agency pre-formed incident management teams;

- aircraft coordination and control;
- DEC access to FESA’s incident management database.

Observations

10. The Hazard Management Agency for bushfire has not been defined. Defining the HMA for bushfire should be addressed.

11. Triggers and a process for transfer of command and control from DEC to FESA should be developed and documented.

12. The Interagency Bushfire Management Committee and its sub-committees are the logical central platform for developing and strengthening future joint bushfire strategies and common systems of work between bushfire management agencies in Western Australia.

13. A Memorandum of Understanding signed by the Chief Executives of DEC and FESA would be a valuable statement of joint commitment between the two agencies.

Terms of Reference # 4: DEC’s equipment and public information strategy

DEC’s submission

DEC has developed highly effective satellite communication systems and information management systems. DEC also has a suite of high quality equipment and facilities for fire management and prescribed burn management.

DEC is a major stakeholder in the W.A. Emergency Radio Network (WAERN) which will lead to better interoperability with FESA, volunteer Bush Fire Brigades, local authorities and government agencies.

DEC also has a “fire support system” database that allows interchange between DEC and its stakeholders.

DEC also has a public information strategy that is focussed on providing information on prescribed burning and fire ecology (at High School level). The DEC web site is a key tool in providing this information. [1]

Key points from other submissions

The Association of Volunteer Bush Fire Brigades says that DEC has access to a “*large number of fire trucks, bulldozers, tractors, spotter planes and weather stations*”.

The Association is also of the view that public information needs to be improved by all agencies, with the key issue being the timeliness of information to the public. [6]

FPC is of the view that DEC's equipment strategy is "sound" and equipment deployment is determined on a structured risk management basis. FPC supports the change to a single access point and common protocols (through FESA) for public information. [7]

The W.A. Farmer's Federation is of the view that DEC's communication hardware is "*generally adequate*" but "*...the effectiveness of its use is another matter*". They reinforce that "*communication between all parties at an event has to improve*". [8]

The Bush Fire Front say that in some of the more remote areas there are problems with communications systems and vegetation mapping is less sophisticated. They are of the view that beyond the south west of the state DEC is more reliant on hiring equipment from local government, mining companies and contractors. [5]

The Fire Control Officer from the Shire of Donnybrook/Balingup says that "*FESA should have the lead role in public education*".

FESA advise that a "*range of public information initiatives*" developed by FESA will be available to all fire management agencies during an emergency. [2]

Discussion

Evidence was provided on DEC's firefighting equipment and resources. DEC operate a significant fleet of light and heavy fire tankers. DEC also operate a fleet of 17 heavy earth moving machines and a number of low loaders, as well as having access to additional contract machinery in key locations. All of this equipment is tailored to operate in forest fire environments. The importance of maintaining forest fire specific equipment cannot be understated. In particular, ready access to heavy bulldozers is critical for fast and effective fire suppression in forest fuels.

It was noted that DEC firefighting vehicles often work adjacent to the DEC estate and on private land and on and around major roads and highways. DEC fire tankers are not covered by the emergency vehicle provisions of the Australian Road Rules. In many states and territories in Australia and in North America land management agency fire vehicles are designated as emergency vehicles. DEC should consider whether including DEC fire tankers as emergency vehicles might provide operational and safety benefits as well as offering an additional degree of flexibility and protection in emergency situations.

DEC operates a significant fleet of aircraft and has a substantial aerial fire capability. Their aerial detection system includes nine fixed wing aircraft and is unique in Australia. Submissions reinforced the importance of early detection to quick response and early control of incipient fires.

A trial of fire sensing technology is being conducted in Victoria and New South Wales. DEC should monitor the outcome of that trial and assess its application in W.A. forests.

DEC also operate eight fixed wing air tankers which are based at Jandakot, Bunbury, Manjimup and Albany. DEC also contract two Type 3 (light) helicopters, operate fire bombing bases and have a well developed aerial ignition capability.

FESA also operate Type 1 and Type 3 helicopter air tankers in the Perth and Perth Hills area.

Both fleets are appropriate for the respective risks in their primary area of operations. An aviation sub-committee to the Interagency Bushfire Management Committee has been established and should form the basis for future joint agency aerial firefighting planning. There is value in this sub-committee developing a 3 year plan for the future development of aerial fire capability in W.A.

Observations

14. The development of a three year aerial firefighting strategy for W.A. would ensure optimal development of a joint air capability.

15. Maintaining the DEC fleet of tankers, bulldozers and low loaders is crucial to DEC's fire management and control capability.

General comments from submissions

DEC's submission

DEC is of the view that they are *“at least as well developed as any other fire authority within W.A. or nationally”*.

DEC has approximately 50 staff dedicated full time to fire and approximately 500 additional staff who are part-time. DEC advises of a sense of growing reluctance in staff to take on fire roles. More time is needed to be allocated for staff to take time to undertake refresher training and to revise re-issued or updated documentation.

DEC is of the view that the future challenge is to replace the loss of experienced bushfire managers (through impending retirements in FPC and DEC).

DEC also note that Commonwealth Grant funding (from the Bushfire Mitigation Program) has made a “very significant” contribution to DEC's capacity to undertake fire management works in both DEC managed and unallocated Crown Lands. With changes to Commonwealth Grant funding arrangements, this source is now less certain. [1]

Key points from other submissions

The FPC says that “*DEC and its predecessors have been and are regarded, nationally and internationally as leaders in fire management*”. FPC warns that “*Extreme caution should be exercised before reducing DEC’s involvement in bushfire command and control in the short to medium term*”.

The Community and Public Sector Union Civil Service Association highlights that the contribution by DEC employees is valuable and often goes unrecognised. There is a need to recognise the significant achievements in fire suppression, prescribed burning, safety record, relationships with local governments and bush fire brigades and the status of DEC nationally and internationally.

The Association says the major difficulty is ensuring there are sufficient human resources to cover the variety of positions to fill rosters required for fire management. They suggest that fire needs to be recognised as a core function of DEC. [12]

There was evidence and comment from Local Government that DEC has earned the respect of the majority of the community and of volunteer Bush Fire Brigades by the commitment and experience of DEC staff involved in bushfire management and by their empathy with the environment.

The Association of Volunteer Bush Fire Brigades says that “*a lot of trust exists between DEC and Bush Fire Brigades...*” [6]

The W.A. Farmer’s Federation says that the management, coordination and personnel resources that the DEC brings to fire are of a high standard. [8]

Discussion

A number of submissions, including those by DEC, the Bush Fire Front, the Forest Products commission and the Community and Public Sector Union Civil Service Association have drawn attention to the loss of experienced staff in DEC and the potential for this to affect DEC capability in the future if not addressed.

During the course of the review a number of “core fire management competencies” were discussed and identified with senior DEC officers. It is useful to recognise these core competencies. Whilst some competencies are shared by other organisations (such as local government and FESA), in the context of this review and the area of DEC’s responsibility, these core competencies go to the heart of DEC’s fire management capability.

DEC core fire management competencies could be described as:

- An understanding of the broad land management principles and the role of fire in the landscape.
- A position of trust in the community, particularly in the south west of W.A.
- A unique and practical knowledge of fire management and how to apply fire to and suppress fire in forested landscapes.

- A mature system for implementing AIIMS and establishing Incident Management Teams.
- A particular knowledge about application of prescribed burning in forest, heathland and mallee vegetation.
- Strong bushcraft skills including road construction and maintenance and tree felling.
- A capacity to mobilise large numbers of trained resources, heavy equipment and aircraft quickly in the centre of gravity around south west Western Australia.
- A culture of doing and learning.

The value of DEC staff (at every level) in delivering fire management in Western Australia, particularly in the south west forests, must not be underestimated. DEC firefighters and fire managers are often not portrayed prominently in the media or on the political stage. Forest firefighting, incident management and fuel reduction burning are all specialised and technically challenging skills. We should not, and must not, take these people or the contribution that they make to Western Australian society for granted.

These specialist skills, be it bulldozer operations, aerial ignition, incident planning or prescribed burn planning often many years of training, practice and development to attain a level of organisational competence. In many of these skills, DEC currently displays a standard that is in “the best class” and “best in class” nationally and internationally.

Whilst the relationship between DEC and FESA will continue to grow, FESA’s role and its organisational capabilities are subtly yet distinctly different to that of DEC. Therefore the maintenance of fire management capability in DEC must continue and be developed into the future. As noted in numerous submissions, the core to DEC’s fire management capability is found within the people in DEC.

The key people management challenges for DEC will be centred around:

- Retaining existing experienced fire management staff.
- Motivating and providing incentives to staff who are not currently involved in fire management, to participate in fire operations and incident management.
- Providing a clearly defined learning pathway for staff that choose to pursue a fire management career.
- Recruiting new staff into fire management roles.

In order to meet the future people needs of fire management in DEC, urgent consideration should be given to developing a fire management staff succession plan. Such a plan needs to address the key areas of recruitment, retention, motivation and training pathways.

The plan could also examine ways of involving or retaining (in a part-time or casual capacity) recently retired experienced DEC officers in order that maximum opportunity is taken to transfer on their skills and experience.

Firefighting (including fuel reduction burning) is a specialised and high risk activity. The people in the DEC fire management system make special sacrifices to maintain their competence and availability for bushfire management. DEC should consider

some form of recognition and reward framework that personally acknowledges staff commitment through time.

Observations

16. A DEC fire management staff succession plan would minimise the loss of core fire management skills and experience in the future and provide a planned approach to development of prospective fire management staff.

17. A staff recognition and reward framework for service to fire management should be considered for DEC fire staff.

Conclusion and Recommendation

DEC has a sound capability and capacity for managing fire on its estate in Western Australia. A number of observations have been made that highlight where improvements to DEC and its systems of work can be made.

It is recommended that DEC analyse each observation and develop a continuous improvement action plan based on the observations.

Submissions

1. Robert Atkins, Acting Director General, Department of Environment and Conservation WA.
2. Ms Jo Harrison-Ward, Chief Executive Officer, Fire and Emergency Services Authority of WA.
3. Duane Bell, Assistant Commissioner, Counter Terrorism and State Protection, WA Police.
4. Stephen Price, AWU State Secretary, West Australian Branch, The Australian Workers' Union.
5. Roger Underwood, Chairman, The Bushfire Front Inc.
6. Brian Hamence AFSM, on behalf of The Association of Volunteer Bush Fire Brigades of WA Inc.
7. David Hartley, Acting General Manager, Forest Products Commission Western Australia.
8. Mike Norton, President, The Western Australian Farmers Federation.
9. RG Jeffereys, Senior Ranger and Fire Control Officer, Shire of Donnybrook/Balingup.
10. D Gossage AFSM, Manager Emergency Services, Chief Fire Control Officer, Serpentine Jarrahdale Shire.
11. Eddy Liddelow, Chairman, Fire For life Inc.
12. Ms Toni Walkington, Branch Secretary, Community and Public Sector Union Civil Service Association of WA.

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
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Assessment Against Criteria For Capability To Manage A Major Bushfire

Methodology

This section proposes a set of criteria for assessing organisational capability to manage major bushfires. The criteria have been grouped into common capability areas.

Each criteria has been stated and the overall rating of the Department of Environment and Conservation W.A. has been depicted by a “traffic light” colour code. The colour codes are interpreted as follows:

	GOOD TO EXCELLENT	The criteria is fully met and DEC’s capability meets or exceeds contemporary standards
	SATISFACTORY – KEEP IMPROVING	The criteria is met, but there may be room for improvement or development to meet contemporary standards.
	UNSATISFACTORY – ACTION REQUIRED	The criteria is not substantially demonstrated or met. Action is required to become capable in this area.


Where appropriate, for each criteria a comment is provided to support the assessment rating. If appropriate, an observation may also provided to guide possible future actions or directions.


In many cases the overall rating and assessment is determined by a qualitative professional judgement by the assessor. This professional judgement has been arrived at after examination of many documents (refer to the reference list), consideration of written submissions, briefings, field visits and meetings with relevant officers. Wherever possible all information and viewpoints have been taken into account in these assessments. It is acknowledged that these assessments are the best endeavours by the reviewer at the time using the information available and in the time available.


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LEGISLATION / POLICY


Legislation and policy framework provides a clear authorising environment to the people and systems of work.

	Is the legislation underpinning the agency's activities understood by decision makers?
Comment	Legislation is appropriate.


	Do agency personnel have appropriate authority and powers to undertake their tasks?
Comment	Yes. DEC needs to investigate if there is advantage in its firefighting vehicles being covered as "emergency vehicles" under the Australian Road Rules.


	Does the organisation take appropriate actions to fulfil its legislative responsibilities?
Comment	Yes. FESA and DEC need to develop triggers for when transfer of fire control from DEC to FESA occurs.

	Do agency personnel also have appropriate legal protections (from litigation)?
Comment	Yes. The public accountability of Incident Management Team personnel is increasing.

	Does the agency structure allow good decision making and governance?
Comment	Decision making is delegated and decentralised. An observation is made that a fire organisation wide decision making process should be developed and adopted. An observation is made that a more robust system be developed so that better higher level guidance can be offered.


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	Are resources sufficient to undertake duties imposed by legislation?
Comment	DEC operates in an environment of competition for scarce resources. The recently reviewed system for funding DEC's suppression budget should be monitored to ensure that it does not lead to "cost based" operational decision making (versus "risk based" operational decision making).


	Is there a mechanism for the agency to bring resourcing issues to the attention of government or the Minister?
Comment	Yes. Via the Chief Executive. Also, through the C/E's membership of the State Emergency Management Committee.

ORGANISATIONAL INTENT


The organisation's intent creates a clear and unambiguous direction in relation to fire management.

	Is the organisation's commitment to the fire mission, goals and objectives clearly stated?
Comment	There is strong executive commitment to fire in DEC. An observation is made that this commitment be re-affirmed. An observation is made that the DEC fire management policy be reviewed and updated.

	Are goals and objectives aligned to higher level strategies and government policies?
Comment	DEC fire mission, goals and principles should be aligned with those of FESA.


	Is there a system in place to monitor and review goals and objectives?
Comment	Yes.


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	Is the operational doctrine articulated in a clear and unambiguous way to all people in the organisation?
Comment	The system of Fire Operations Guidelines is very comprehensive. An observation is made that DEC should consider publishing a new reference document that describes policy, doctrine and key systems of work of the fire management system. This document would be a “brief case” or “back pack” reference and would be reviewed annually and issued to all senior staff and fire management personnel.

RELATIONSHIPS

Relationships with other organisations are clearly articulated, are effective and are continuously invested in.

	Are there “statements of common intent” with key stakeholders?
Comment	DEC has MoU’s in place with key local government areas. An observation is made that there be a MoU between DEC and FESA signed by the respective Chief Executives.


	Are relationships with key stakeholders recognised and invested in?
Comment	Yes. Observations are made about developing closer relationships with FESA. In particular, there is capacity for FESA to participate in Pre-Formed Incident Management Teams.


	Is the legislative role and organisational intent of partner agencies known and understood?
Comment	An observation was made that DEC should be consulted on planning development proposals adjacent to the DEC estate.


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CULTURE


The organisational culture facilitates a “learning organisation” and aligns to the expectations of the government, stakeholders and the executive.

	Does the agency have a safety culture and/or a statement of safety commitment?
Comment	Yes. The safety culture can be reinforced by including statements in the fire doctrine.


	Does the agency culture support the goals of the agency?
Comment	Yes. There is strong commitment to the fire program, particularly in the Regional Services Directorate. There is an opportunity to extend and reinforce this commitment through a reward and recognition framework.


	Is there a culture of adaptation and continuous improvement?
Comment	Yes.


	Is the culture supported by statements of intent and principles of operation?
Comment	A culture of “Lessons Learned” and continuous improvement should always be reinforced by the Executive and at every opportunity.

	Are there systems of review, benchmarking and learning in place?
Comment	Generally yes. The procedure of Post Incident Analysis is very good.

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	Do systems of work capture and pass on core knowledge (“doctrine”) of the organisation?
Comment	Partly. An observation is made about documenting key organisational fire doctrine in a single source “briefcase” guide.


	Is there sufficient investment in research and development?
Comment	Yes. DEC has its own researchers and is a member of the Bushfire CRC.


	Is investment in staff learning development adequate to meet future generational and organisational demands?
Comment	Generally yes. An observation is made about the need to develop a staff succession plan and to develop clear pathways for staff who want to follow a fire management career.

PEOPLE


People are competent, capable and motivated to work in the organisation and work to the organisation’s mission.


	Is there a system in place to have dialogue with people in the organisation and their industrial body?
Comment	Yes.


	Do people get a say in how they do their work?
Comment	Yes.


	Are people who work in the incident management system trained?
Comment	Yes.


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	Is training to appropriate standard?
Comment	Yes.


	Is there a system for recording individual training and competency?
Comment	Yes.

	Is there a framework of competency accreditation / currency in place?
Comment	Yes.


	Is training matched to an organisational training needs analysis?
Comment	Yes. Training has also included FESA, local government and Bush Fire Brigades personnel.


	Are people regularly exercised in their incident management role?
Comment	Consideration needs to be given to an annual pre-season Level 3 Incident Management Team exercise that is used to accredit each IMT.


	Is there a process for performance monitoring of people in the incident management system?
Comment	Yes.


	Is there a system in place for health, safety and welfare of people (especially during and after an incident or accident)?
Comment	Yes.


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	Do staff have a personal or professional development framework?
Comment	Yes.

	Is there a succession plan in place for key personnel?
Comment	More work is required to develop a staff succession plan so that current generation staff can be replaced into the future.

	Does recruitment induct people into the fire/emergency role in the organisation?
Comment	Yes – within the Regional Services Directorate. This needs to be extended and encouraged through the whole of DEC.

	Does the organisation utilise all the skills of all it's people in the best way to achieve the organisation's mission?
Comment	Yes.


	Are people adequately recognised and rewarded for their efforts?
Comment	An observation is made that a reward and recognition framework for DEC staff needs to be considered.


	Are people motivated to undertake the organisation's mission?
Comment	Yes. In the future more incentives need to be considered for staff undertaking fire roles.


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SYSTEMS OF WORK


Systems of work are documented, articulated and reflect best practice.

	Is there a clearly articulated “mission statement” about fire?
Comment	An observation is made that the DEC Fire Management Policy needs review and re-issuing. A clearer “mission” statement should be part of this review.


	Is there a set of guiding principles, policies and procedures in relation to fire (and/or emergency management)?
Comment	Yes. There is a very good set of Fire Operations Guidelines, course notes and manuals. An observation is made that the DEC Fire Management Policy needs to review the principles.


	Are roles and responsibilities of key appointments clearly articulated?
Comment	Generally yes. An observation is made about defining more clearly a role for the Regional and State Fire Coordinator. This needs to be developed in conjunction with FESA.


	Is fire documentation articulated in a readily useable manner?
Comment	Generally yes. An observation is made about issuing a “briefcase” guidelines document that can be a readily accessible reference for fire personnel.


	Is there a process of adaptation or continuous improvement of operational policy and procedures?
Comment	Yes. However some key policy documents were more than 4 years old. An annual issue of key guidelines would help to keep information current.

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	Does the organisational structure support the conduct of the fire “mission”?
Comment	Yes.


	Are organisational policies and procedures within a risk management framework?
Comment	Yes.

	Are systems of work subjected to periodic national and international benchmarking?
Comment	Yes.


	Are systems of work subjected to periodic independent audit?
Comment	Independent audit tends to be opportunistic. Consideration could be given to a more formalised process of period review.


MAJOR INCIDENT MANAGEMENT
Systems for major incident management are in place and are effective.


	Do systems for major incident management reflect state and national policies?
Comment	Yes.


	Are there systems in place for coordination of response, information flow and planning for major incidents?
Comment	Yes.


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	Does planning consider the future strategic situation for the “worst case” vs “most likely” situation?
Comment	This needs more emphasis in the DEC IMT's. AIIMS training includes a process of options analysis. An observation is made to develop and adopt a system of appreciation and decision making.

	Is there a decision-making process that is based on risk?
Comment	Yes. Refer above


	Does the command and control structure that is established for incidents meet agency and whole of government needs?
Comment	Yes. The triggers for FESA to assume control of an incident need to be developed.


	Are there systems for monitoring, engaging and having oversight of incident, regional and state situations in place and effective?
Comment	Yes. An observation is made about developing a process that provides more rigour around the provision of higher level guidance.


	Is there a framework and policies for qualifying and accrediting personnel for incident management roles?
Comment	Yes.


	Is major incident infrastructure (ICC's, tools etc) in place and does it meet anticipated need for contingencies?
Comment	Yes. Increased mobility has led to increased flexibility.


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	Are there sufficient competent personnel for incident management in contingency situations?
Comment	Yes. An observation is made about developing a quick response IMT capacity. Consideration needs to be given to establishing more Pre-Formed IMT's with FESA.

	Are regular exercises held to test plans and exercise personnel?
Comment	An observation is made to conduct an annual pre-season exercise for each Level 3 IMT.

	Are there systems in place for involving other government and non-government agencies in an incident?
Comment	Yes.

	Are there systems in place for: <ul style="list-style-type: none"> • Incorporating local knowledge into action plans? • Business continuity in event of interruptions to critical infrastructure? • Public advice and warnings? • Road closures? • Evacuation? • Media briefings?
Comment	Generally yes. An observation is made proposing a local Bush Fire Brigades officer being appointed as a deputy to the Operations Officer where appropriate. Other functions require triggers to be developed with FESA.


	Is there access to geospatial data and information for incident management and decision-making?
Comment	Yes.


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RESPONSE PLANNING


Readiness and response planning are current and meet operational situation needs.

	Are readiness and response plans in place?
Comment	Yes

	Are plans “tenure blind”?
Comment	Plans relate to DEC estate. DEC attends council fire planning meetings where appropriate.


	Are plans consistent with and integrated with other agencies?
Comment	Yes.

	Do plans specify a weight of attack and escalation procedures?
Comment	Generally yes.


	Is there a policy and a system for capturing and monitoring costs of incident response?
Comment	Yes.


EQUIPMENT


Equipment is fit for purpose, safe and supply meets operational demand.


	Is equipment “fit for purpose”?
Comment	Yes.

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	Does equipment and vehicles meet relevant national standards?
Comment	Yes.

	Are numbers of plant and equipment adequate for normal demand peaks?
Comment	Yes. Contract plant and equipment is relied on in northern and eastern remote areas.

	Are resources allocated according to risk and benefit?
Comment	Yes.

	Are there arrangements for accessing additional plant and equipment in times of contingency?
Comment	Yes.

	Are there arrangements in place for sharing resources from other agencies (including interstate agencies)?
Comment	Yes.

	Are vehicles and equipment designed to achieve interoperability?
Comment	Yes.

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AERIAL FIREFIGHTING

Aerial firefighting arrangements meet national standards and provide a flexible aircraft capacity.



Is the mix of aircraft appropriate and flexible?

Comment

Yes.



Are sound contractual arrangements in place?

Comment

Yes.



Do aircraft management and coordination arrangements meet operational needs?

Comment

Yes.



Are arrangements in place for interagency / interstate sharing of aviation resources?

Comment

Yes.
There is potential for a more unified system of aircraft dispatch, control and coordination.



Are there appropriate guidelines for allocating aircraft to the highest priority need?

Comment

Yes.




Are aviation practices guided by national standards?


Comment


Yes.


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COMMUNICATIONS INFRASTRUCTURE
Communications infrastructure is robust and meets operational needs.


	Does the voice communication system meet normal peak activity demands?
Comment	Yes. Plans are in place to upgrade to the WAERN system in the future.

	Is there sufficient capacity in voice systems to deal with contingent events?
Comment	Yes.


	Does voice system allow for cross-agency communication / interoperability?
Comment	Yes. Communication plans developed for fires need to incorporate communication with bush fire brigades appliances and personnel.


	Are there systems in place for redundancy / business continuity for contingent events?
Comment	Yes.

	Does the incident data system meet agency needs?
Comment	Yes. There is potential for a single incident data management system to be shared between FESA and DEC.

	Is the incident data system accessible by multiple agencies?
Comment	Yes. There is some interagency access. There is potential in the future to move towards a common database that has access across both agencies.


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	Can data be transmitted from the database into useable information (eg: public warnings)?
Comment	Yes.

	Is there a framework, system and arrangements in place for dissemination of information and warnings to other stakeholders?
Comment	Yes. FESA has developed these systems.


RECOVERY

Arrangements are in place to assist in the recovery after a major bushfire incident.


	Is there a crisis plan or checklist for organisational crises?
Comment	Yes.


	Is there a plan for managing organisational reputation?
Comment	Yes

	Are there guidelines for hot debriefing of key personnel?
Comment	Yes

	Are arrangements in place for critical incident stress debriefing?
Comment	Yes

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	Is there a worker's compensation and rehabilitation framework in place?
Comment	Yes

	Is there a framework for "after action review"?
Comment	Yes.